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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,576	05/21/2007	Hanae Kaku	SHIMIZU-13111	3078

23535 7590 12/15/2008

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EXAMINER	
IBRAHIM, MEDINA AHMED	

ART UNIT	PAPER NUMBER
1638	

MAIL DATE	DELIVERY MODE
12/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,576	KAKU ET AL.	
	Examiner	Art Unit	
	Medina A. Ibrahim	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *3 and 11-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-10 and 14-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/21/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group 1, claims 1-2, 4-10 and 14-16, in the reply filed on 11/10/08 is acknowledged. In the response, Applicants requests rejoinder and consideration of the elected product claims with the process of making and/or using of the elected product, upon allowance of the elected product. However, in the restriction requirement of 10/10/08, the elected product and a method of using the product were grouped together in Group I. The requirement is made Final.

Claims 1-16 are pending.

Claims 3 and 11-13 are withdrawn from consideration as being directed to the non-elected invention.

Claims 1-2, 4-10, and 14-16 are examined.

Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. See, for example, page 7, line 9. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Objections

Claims 14-16 are objected to for depending upon the non-elected invention, claim 3. Appropriate correction is required.

At claim 1, it is suggested that ---An isolated--- be inserted before "DNA", for clarification that the DNA is isolated (the claims recites SEQ ID NO:)

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-2, 4-10, and 14-16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated DNA encoding SEQ ID NO: 2 or 4, or the DNA sequence of SEQ ID NO: 1 or 3, a vector comprising said DNA sequence, a transgenic plant comprising said DNA sequence or vector and a method of transforming a plant with said DNA sequence, does not reasonably provide enablement for an agent comprising an isolated DNA encoding a protein with one or more amino acid substitutions, additions, deletions and/or insertions in SEQ ID NO: 2 or 4, or DNA that hybridizes to SEQ ID NO: 1 or 3. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The claims are drawn to, inter alia, a DNA encoding a plant protein that has a binding activity to chitin oligosaccharide elicitor, said DNA hybridizes to SEQ ID NO: 1 or 3, or encodes a protein comprising an amino acid sequence with one or more amino acid substitutions, deletions, additions, and/or insertions in the amino acid sequence of SEQ ID NO: 2 or 4; wherein said DNA is contained with a vector; a plant/ cell comprising said DNA; a transformed progeny of said plant; and a method of transforming and expressing said DNA in a plant/ cell to control plant diseases. In

contrast, Applicant teaches identification and isolation of a DNA sequences of SEQ ID NO: 1 or 3 encoding SEQ ID NO: 2 or 4 and transformation of plants with said DNA or with a vector comprising the DNA to produce transgenic plants having disease resistance activity.

Applicant, however, has not provided guidance for the obtention and use of the DNA sequences as broadly claimed. Applicant has not taught a single variant of SEQ ID NO: 1 or 3 that encodes a protein with one or more amino acids modified relative to SEQ ID NO: 2 or 4 and that retains the disease resistance activity of SEQ ID NO: 1. The specification is completely silent with respect to hybridization and wash conditions which would allow the specific isolation of the target DNA sequences. Applicant has not provided guidance with respect to specific regions in SEQ ID NO: 2 or 4 that would tolerate modifications. Applicant has not provided guidance for the production of transgenic plant having resistance against all diseases including all fungi, nematodes, bacteria, insects, and virus using exemplified or non-exemplified DNA sequences.

The scope of the DNA sequence of the claims encompasses sequences encoding proteins with multiple of modifications including multiple deletions, additions and/or substitutions in SEQ ID NO: 2 or 4 and that retain the pathogen resistance activity. Applicant, however, has provided no guidance for any modifications to any of the disclosed sequences of SEQ ID NO: 1-4 that resulted in sequences having both the structural and functional properties as recited in the claims.

While mutagenesis techniques are known, it is not routine in the art to screen for multiple substitutions or multiple modifications as encompassed by the instant claims. One skilled in the art would expect any tolerance to modification for a given DNA/protein to diminish with each further and additional modification or multiple substitutions/ deletions. One skilled in the art would have to make all possible nucleotide substitutions and deletions in the 1071 nucleotide long sequence of SEQ ID NO: 1 and test all nucleotide sequences that meet the structural limitations to determine which also meet the functional limitation. One would also have to test and evaluate pathogen resistance activity of the DNA sequences in a transgenic plant.

Fourgoux-Nicol et al (1999, Plant Molecular Biology 40: 857-872) teach the identification of a 674bp fragment using a 497bp probe incorporating stringent hybridization conditions comprising three consecutive 30 minute rinses in 2X, 1X and 0.1X SSC with 0.1% SDS at 65°C (page 859, left column, 2nd paragraph). Fourgoux-Nicol et al also teach that the probe and identified DNA fragment exhibited a number of sequence differences comprising a 99bp insertion within the probe and a single nucleotide gap, while the DNA fragment contained 2 single nucleotide gaps and together the fragments contained 27 nucleotide mismatches. Taking into account the insertions, gaps and mismatches, the longest stretch of contiguous nucleotides to which the probe could hybridize consisted of 93bp of DNA (page 862, Figure 2).

Therefore, given the breadth of the claims, the unpredictability inherent in the art with respect to DNA/protein modifications and hybridizing sequences, the limited guidance and working examples in the specification as discussed supra, and the state

of the prior art, the claimed invention is not enabled throughout the broad scope. See In re Wands 858 F.2d 731, 8USPQ2nd 1400 (Fed. Cir, 1988).

See, also, *Amgen Inc. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ 2d 1016 at 1027 (Fed. Cir. 1991) where the court held that the disclosure of a few gene sequences did not enable claims broadly drawn to any analog thereof.

Written Description

Claims 1-2, 4-10, and 14-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are broadly drawn to a multitude of DNA sequences encoding multitude proteins with one or more amino acids substitutions, deletions, additions, and/or alterations, and multitude of DNA sequences that hybridize to SEQ ID NO: 1 or 3 under any stringent conditions. In contrast, Applicant describes the isolated DNA sequence of SEQ ID NO: 1 or 3 encoding SEQ ID NO: 2 or 4, a vector comprising said DNA sequence, transformed plant, plant cell or seed comprising said DNA sequence, and a method of transforming plants with said DNA sequence. These are genus claims.

In *Eli Lilly and Co.* 43 USPQ2d 1398 (Fed. Cir. 1997), the court stated:

An adequate written description of a DNA "requires a precise definition, such as by structure, formula, chemical name, or physical properties", not a mere wish or plan for obtaining the claimed chemical invention… Accordingly, "an adequate written description of a DNA requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it; what is required is a description of the DNA itself (43 USPQ2d at 1404).

The court held that held that human insulin-encoding cDNA is not described by prophetic example, which sets forth only a general method for obtaining the human cDNA:

The name cDNA is not itself a written description of that DNA; it conveys no distinguishing information concerning its identity…Describing a method of preparing a cDNA or even describing the protein that the cDNA encodes…does not necessarily describe the DNA itself. No sequence information indicating which nucleotides constitute human cDNA appears in the patent, as appears for rat cDNA….Accordingly, the specification does not provide a written description of human cDNA (43 USPQ2d at 1405).

The description of a single species of rat cDNA was held insufficient to describe the broad genera of vertebrate or mammalian insulin:

"In claims to genetic material…a generic statement such as 'vertebrate insulin cDNA' or 'mammalian insulin cDNA', without more, is not an adequate written description of the genus because it does not distinguish the claimed genus from others, except by function. It does not specifically define any of the genes that fall within its definition. It doesn't define any structural features commonly possessed by members of the genus that distinguish them from others. One skilled in the art therefore cannot, as one can do with a fully described genus, visualize or recognize the identity of the members of the genus. A definition by function…does not suffice to define the genus because it is only an indication of what the gene does, rather than what it is (43 USPQ2d at 1406).

The court continued:

"Thus…a cDNA is not defined by the mere name 'cDNA', even if accompanied by the name of the protein that it encodes, but requires a kind of specificity usually achieved by means of the recitation of the sequence of nucleotides that make up the cDNA…A description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus or of a recitation of structural features common to members of the genus, which features constitute a substantial portion of the genus". (43 USPQ2d at 1406). See also where the court teaches that the disclosure of a process for obtaining cDNA from a particular organism and the description of the encoded protein fail to provide an adequate written description of the actual cDNA from the organism which would encode the protein from that organism, despite the disclosure of a cDNA encoding that protein from another organism.

Applicant has not described the composition and structure of all DNA

sequences encompassed by the claims. One would not expect that the majority of the DNA sequences that hybridize to SEQ ID NO: 1 or 3 under any stringency conditions would encode a polypeptide having the activity of SEQ ID NO: 2. The hybridizing sequences are expected to vary because different " stringent conditions" including high, moderate and low, will yield unrelated DNA sequences. Therefore, a substantial variation in structures and function is expected among the claimed DNA sequences. Therefore, SEQ ID NO: 1 or 3 is not a representative species of the genus of DNA sequences of the claims. Given this lack of description of representative DNA sequences encompassed by the claims, the specification has not provided an adequate description for vectors, plant cells and plants comprising said DNA sequences. Therefore, the specification fails to sufficiently describe the claimed invention in such full, clear, concise, and exact terms that a skilled artisan would recognize that Applicant was in possession of the invention as broadly claimed at the time of filing.

Therefore, weighing all factors above, the claimed invention does not meet the current written description requirements.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-10, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Yano et al (US 6, 274, 789 (A)).

The claims are broadly drawn to an isolated DNA sequence that hybridizes to SEQ ID NO: 1 or 3 under any stringency conditions; and to a DNA sequence encoding a protein with one more amino acid substitutions, deletions, additions, and/or alterations relative to SEQ ID NO: 2 and having pathogen resistance activity; a vector comprising said DNA sequence operably linked to a promoter, transgenic plant / cell/seed stably transformed with a DNA construct and a method of transforming a plant with said DNA construct.

Yano et al teaches an isolated DNA from rice encoding a polypeptide resistance to a broad range of rice blast fungi, a vector or DNA construct comprising said isolated DNA operably linked to a constitutive or inducible promoter, and a method for transforming and regenerating plants from transformed plant cells expressing said isolated DNA. The cited reference also teaches transformed plants and plant cells and seed including rice, wheat and barley with resistance to blast disease (columns 1-2, 6-7, 9-10, and 39-40). The prior art DNA sequence from rice would hybridize to SEQ ID NO: 1 or 3 under stringency conditions, and would encode a protein with one or more amino acids substitutions/deletions and/or alterations in SEQ ID NO: 2 or 4, absent evidence to the contrary. Therefore, Yano et al disclose all claim limitations.

Claims 1-2, 4-10, and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by LaRosa et al (US 20040123343 A1, filed 05/14/03).

La Rosa et al teach an isolated DNA having 100% sequence identity to Applicant's SEQ ID NO: 1 and encoding a polypeptide having 100% sequence identity with Applicant's SEQ ID NO: 2 and 4 (see alignment of sequences below), a vector comprising said DNA, transformed plant/cells/seed, and a method of transforming plants including rice with said DNA to produce transgenic plants/cells with increased disease resistance. The chitin oligosaccharide elicitor binding activity is an inherent property. Therefore, La Rosa et al teach all claim limitations.

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RESULT 2
ANK99468
ID   ANK99468 standard; DNA; 1399 BP.
XX
AC   ANK99468;
XX
DT   28-DEC-2007  (first entry)
XX
DE   Oryza sativa nucleotide sequence SEQ ID NO 13471.
XX
KW   recombinant DNA; transgenic plant; crop improvement; Gene therapy;
KW   disease-resistance; stress tolerance; gene; ds.
XX
OS   Oryza sativa.
XX
PN   US2004123343-A1.
XX
PD   24-JUN-2004.
XX
PF   14-MAY-2003; 2003US-00437963.
XX
PR   19-APR-2000; 2000US-0197872P.
PR   18-APR-2001; 2001US-00837604.
XX
PI   La Rosa TJ,  Kovalic DK,  Zhou Y,  Cao Y,  Wu W,  Boukharov AA;
PI   Barbazuk BW;
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PT   New recombinant DNA construct, useful for producing transgenic plants to
PT   produce plants having improved properties e.g. disease resistance,
SQ   Sequence 1399 BP; 337 A; 436 C; 321 G; 305 T; 0 U; 0 Other;

Alignment Scores:
Pred. No.:              8.82e-147      Length:         1399
Score:                  1850.00        Matches:        356
Percent Similarity:     100.0%         Conservative:   0
Best Local Similarity:  100.0%         Mismatches:     0
Query Match:            100.0%         Indels:         0
DB:                     16             Gaps:           0

US-10-591-576-2 (1-356) x ANK99468 (1-1399)

Qy          1 MetAlaSerLeuThrAlaAlaLeuAlaThrProAlaAlaAlaAlaLeuLeuLeuLeuVal 20
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGCGTCGCTCACCGCCGCCCTGGCCACGCCGGCGGCCGCTGCCCTCCTCCTCCTCGTC 60

Qy         21 LeuLeuAlaAlaProAlaSerAlaAlaAsnPheThrCysAlaValAlaSerGlyThrThr 40
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 CTCCTCGCCGCCCCCGCCTCCGCCGCCAACTTCACCTGCGCGGTGGCTTCAGGCACCACC
120

Qy         41 CysLysSerAlaIleLeuTyrThrSerProAsnAlaThrThrTyrGlyAsnLeuValAla 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 TGCAAGTCCGCCATCCTCTACACCTCCCCCAACGCCACCACCTACGGCAACCTCGTCGCC
180

Qy         61 ArgPheAsnThrThrThrLeuProAspLeuLeuGlyAlaAsnGlyLeuProAspGlyThr 80
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 CGCTTCAACACCACCACCCTCCCCGACCTCCTCGGCGCCAACGGCCTCCCCGACGGCACG
240

Qy         81 LeuSerSerAlaProValAlaAlaAsnSerThrValLysIleProPheArgCysArgCys
100
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CTTTCCTCCGCCCCCGTCGCCGCCAATTCCACCGTCAAAATCCCCTTCCGCTGCCGCTGC
300

Qy        101 AsnGlyAspValGlyGlnSerAspArgLeuProIleTyrValValGlnProGlnAspGly
120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 AACGGCGACGTCGGCCAGTCGGACCGCCTCCCCATCTACGTCGTGCAGCCGCAGGACGGG
360

Qy        121 LeuAspAlaIleAlaArgAsnValPheAsnAlaPheValThrTyrGlnGluIleAlaAla
140
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CTCGACGCCATCGCGCGCAACGTGTTCAACGCCTTCGTCACCTACCAGGAGATCGCCGCC
420

Qy        141 AlaAsnAsnIleProAspProAsnLysIleAsnValSerGlnThrLeuTrpIleProLeu
160
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                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       421 GCGAACAACATCCCCGACCCCAACAAGATAAATGTCAGCCAGACGCTGTGGATTCCGCTG
480

Qy       161 ProCysSerCysAspLysGluGluGlySerAsnValMetHisLeuAlaTyrSerValGly
180

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       481 CCCTGCAGCTGCGACAAGGAGGAAGGCTCTAACGTGATGCACCTCGCCTACAGCGTCGGC
540

Qy       181 LysGlyGluAsnThrSerAlaIleAlaAlaLysTyrGlyValThrGluSerThrLeuLeu
200

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       541 AAAGGGGAGAACACGTCGGCGATCGCTGCCAAGTACGGGGTGACGGAGTCCACGCTTCTC
600

Qy       201 ThrArgAsnLysIleAspAspProThrLysLeuGlnMetGlyGlnIleLeuAspValPro
220

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       601 ACCAGAAATAAGATCGACGACCCCACGAAATTGCAGATGGGACAGATTCTAGATGTCCCG
660

Qy       221 LeuProValCysArgSerSerIleSerAspThrSerAlaAspHisAsnLeuMetLeuLeu
240

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       661 CTCCCTGTGTGCCGTTCATCAATCAGCGATACCTCAGCTGATCACAATCTGATGCTCCTC
720

Qy       241 ProAspGlyThrTyrGlyPheThrAlaGlyAsnCysIleArgCysSerCysSerSerThr
260

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       721 CCGGATGGCACCTATGGATTCACCGCAGGAAACTGCATCCGCTGCAGCTGCAGTTCAACT
780

Qy       261 ThrTyrGlnLeuAsnCysThrAlaValGlnAsnLysGlyCysProSerValProLeuCys
280

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       781 ACCTACCAGCTAAACTGCACTGCAGTACAGAACAAGGGATGCCCGTCAGTGCCACTGTGC
840

Qy       281 AsnGlyThrLeuLysLeuGlyGluThrAsnGlyThrGlyCysGlySerThrThrCysAla
300

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       841 AATGGAACGCTGAAGCTTGGTGAGACGAACGGCACCGGTTGCGGATCAACAACGTGCGCC
900

Qy       301 TyrSerGlyTyrSerAsnSerSerSerLeuIleIleGlnThrSerLeuAlaThrAsnGln
320

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       901 TACAGTGGTTACTCCAACAGTTCATCGCTCATCATACAAACCAGCCTTGCAACTAATCAG
960

Qy       321 ThrThrAlaCysGlnArgGlyGlySerGlyArgSerGlnPheAlaArgSerMetTrpSer
340
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        961 ACAACAGCCTGCCAGAGAGGAGGATCTGGGAGGTCGCAGTTCGCTAGGTCCATGTGGAGC
1020

Qy        341 MetSerValIleSerPheHisMetValLeuIleIleIleCysPheLeu 356
                ||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1021 ATGTCTGTTATCTCCTTCCACATGGTGTTGATCATTATCTGTTTCCTT 1068




RESULT 2
ANK99468
ID   ANK99468 standard; DNA; 1399 BP.
XX
AC   ANK99468;
XX
DT   28-DEC-2007  (first entry)
XX
DE   Oryza sativa nucleotide sequence SEQ ID NO 13471.
XX
KW   recombinant DNA; transgenic plant; crop improvement; Gene therapy;
KW   disease-resistance; stress tolerance; gene; ds.
XX
OS   Oryza sativa.
XX
PN   US2004123343-A1.
XX
PD   24-JUN-2004.
XX
PF   14-MAY-2003; 2003US-00437963.

PI   La Rosa TJ,  Kovalic DK,  Zhou Y,  Cao Y,  Wu W,  Boukharov AA;
PI   Barbazuk BW;
XX
DR   WPI; 2004-479809/45.
DR   P-PSDB; ANM01953.
XX
SQ   Sequence 1399 BP; 337 A; 436 C; 321 G; 305 T; 0 U; 0 Other;

  Query Match             100.0%;  Score 1071;  DB 16;  Length 1399;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-179;
  Matches 1071;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps
0;

Qy          1 ATGGCGTCGCTCACCGCCGCCCTGGCCACGCCGGCGGCCGCTGCCCTCCTCCTCCTCGTC 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGCGTCGCTCACCGCCGCCCTGGCCACGCCGGCGGCCGCTGCCCTCCTCCTCCTCGTC 60

Qy         61 CTCCTCGCCGCCCCCGCCTCCGCCGCCAACTTCACCTGCGCGGTGGCTTCAGGCACCACC
120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db         61 CTCCTCGCCGCCCCCGCCTCCGCCGCCAACTTCACCTGCGCGGTGGCTTCAGGCACCACC
120

Qy        121 TGCAAGTCCGCCATCCTCTACACCTCCCCCAACGCCACCACCTACGGCAACCTCGTCGCC
180

              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 TGCAAGTCCGCCATCCTCTACACCTCCCCCAACGCCACCACCTACGGCAACCTCGTCGCC
180

Qy        181 CGCTTCAACACCACCACCCTCCCCGACCTCCTCGGCGCCAACGGCCTCCCCGACGGCACG
240

              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 CGCTTCAACACCACCACCCTCCCCGACCTCCTCGGCGCCAACGGCCTCCCCGACGGCACG
240

Qy        241 CTTTCCTCCGCCCCCGTCGCCGCCAATTCCACCGTCAAAATCCCCTTCCGCTGCCGCTGC
300

              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CTTTCCTCCGCCCCCGTCGCCGCCAATTCCACCGTCAAAATCCCCTTCCGCTGCCGCTGC
300

Qy        301 AACGGCGACGTCGGCCAGTCGGACCGCCTCCCCATCTACGTCGTGCAGCCGCAGGACGGG
360

              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 AACGGCGACGTCGGCCAGTCGGACCGCCTCCCCATCTACGTCGTGCAGCCGCAGGACGGG
360

Qy        361 CTCGACGCCATCGCGCGCAACGTGTTCAACGCCTTCGTCACCTACCAGGAGATCGCCGCC
420

              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 CTCGACGCCATCGCGCGCAACGTGTTCAACGCCTTCGTCACCTACCAGGAGATCGCCGCC
420

Qy        421 GCGAACAACATCCCCGACCCCAACAAGATAAATGTCAGCCAGACGCTGTGGATTCCGCTG
480

              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 GCGAACAACATCCCCGACCCCAACAAGATAAATGTCAGCCAGACGCTGTGGATTCCGCTG
480

Qy        481 CCCTGCAGCTGCGACAAGGAGGAAGGCTCTAACGTGATGCACCTCGCCTACAGCGTCGGC
540

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Db        481 CCCTGCAGCTGCGACAAGGAGGAAGGCTCTAACGTGATGCACCTCGCCTACAGCGTCGGC
540

Qy        541 AAAGGGGAGAACACGTCGGCGATCGCTGCCAAGTACGGGGTGACGGAGTCCACGCTTCTC
600

              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 AAAGGGGAGAACACGTCGGCGATCGCTGCCAAGTACGGGGTGACGGAGTCCACGCTTCTC
600

Qy        601 ACCAGAAATAAGATCGACGACCCCACGAAATTGCAGATGGGACAGATTCTAGATGTCCCG
660

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Db        601 ACCAGAAATAAGATCGACGACCCCACGAAATTGCAGATGGGACAGATTCTAGATGTCCCG
660

Qy        661 CTCCCTGTGTGCCGTTCATCAATCAGCGATACCTCAGCTGATCACAATCTGATGCTCCTC
720
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        661 CTCCCTGTGTGCCGTTCATCAATCAGCGATACCTCAGCTGATCACAATCTGATGCTCCTC
720

Qy        721 CCGGATGGCACCTATGGATTCACCGCAGGAAACTGCATCCGCTGCAGCTGCAGTTCAACT
780
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        721 CCGGATGGCACCTATGGATTCACCGCAGGAAACTGCATCCGCTGCAGCTGCAGTTCAACT
780

Qy        781 ACCTACCAGCTAAACTGCACTGCAGTACAGAACAAGGGATGCCCGTCAGTGCCACTGTGC
840
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        781 ACCTACCAGCTAAACTGCACTGCAGTACAGAACAAGGGATGCCCGTCAGTGCCACTGTGC
840

Qy        841 AATGGAACGCTGAAGCTTGGTGAGACGAACGGCACCGGTTGCGGATCAACAACGTGCGCC
900
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        841 AATGGAACGCTGAAGCTTGGTGAGACGAACGGCACCGGTTGCGGATCAACAACGTGCGCC
900

Qy        901 TACAGTGGTTACTCCAACAGTTCATCGCTCATCATACAAACCAGCCTTGCAACTAATCAG
960
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        901 TACAGTGGTTACTCCAACAGTTCATCGCTCATCATACAAACCAGCCTTGCAACTAATCAG
960

Qy        961 ACAACAGCCTGCCAGAGAGGAGGATCTGGGAGGTCGCAGTTCGCTAGGTCCATGTGGAGC
1020
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        961 ACAACAGCCTGCCAGAGAGGAGGATCTGGGAGGTCGCAGTTCGCTAGGTCCATGTGGAGC
1020

Qy       1021 ATGTCTGTTATCTCCTTCCACATGGTGTTGATCATTATCTGTTTCCTTTGA 1071
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Db       1021 ATGTCTGTTATCTCCTTCCACATGGTGTTGATCATTATCTGTTTCCTTTGA 1071
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Remarks

No claim is allowed.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Medina A. Ibrahim whose telephone number is (571)272-0797. The examiner can normally be reached on M-TH 8:00 am to 5:30 PM, and every other Friday from 8:00 AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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MAI
12/7/2008

/Medina A Ibrahim/
Primary Examiner, Art Unit 1638